

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Reintroduction of Metcalf Canyon Jewelflower at Tulare Hill in Southern Santa Clara County

FONSI 13-10-MP

Recommended by:

Douglas Kleinsmith
Douglas Kleinsmith
Natural Resource Specialist
Mid-Pacific Regional Office

Date: 6/26/13

Concurred by:

Dan Strait
Dan Strait
Program Manager, Habitat
Restoration Program
Mid-Pacific Regional Office

Date: 6/26/13

Approved by:

Anastasia Leigh
Anastasia Leigh
Regional Environmental Officer
Mid-Pacific Region

Date: 7/11/2013



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

Background

The Bureau of Reclamation (Reclamation) proposes to provide \$272,968 from the Central Valley Project Conservation Program (CVPCP) and the Central Valley Project Improvement Act Habitat Restoration Program (HRP) to Santa Clara University (SCU) to propagate and reintroduce the federally endangered Metcalf Canyon Jewelflower (MCJ) in southern Santa Clara County, California.

The purpose of the proposed action is to propagate and reintroduce the federally-endangered MCJ at three sites on Tulare Hill and supplement an existing population at Motorcycle County Park. The proposed action contributes directly to the conservation and management of a federally listed endangered plant species on critical serpentine habitat in Santa Clara County previously impacted by delivery of Central Valley Project (CVP) water through the San Felipe Division of the CVP. The objectives of the project complement the short- and long-term goals of the CVPCP and HRP by directly contributing to the conservation, habitat, and biological needs of listed species in a CVP impacted habitat – serpentine soils of Santa Clara County.

No Action

Reclamation would not contribute \$272,968 from the CVPCP and the HRP to SCU to propagate and reintroduce federally endangered MCJ plants at sites in southern Santa Clara County. SCU would be required to obtain the \$272,968 from other private and public sources.

Proposed Action

Reclamation would contribute \$272,968 from the CVPCP and the HRP to SCU to propagate and reintroduce the federally endangered MCJ to two sites in southern Santa Clara County. The total project cost for this project is \$546,122. The difference between the total project cost and the amount of funding requested is provided in-kind by SCU. The in-kind partnership totals 50.0% of the total project cost.

SCU would implement a 4-year project to reintroduce MCJ at Tulare Hill while supplementing an existing population at Motorcycle County Park on Metcalf Road. SCU would generate seeds for the reintroduction by establishing a captive population of 200 individuals from a small amount of wild collected seed from accessible MCJ occurrences. Plants will be started in pots at the SCU greenhouse and matured at the reintroduction sites, circumventing the failure of plants to produce seed which has been demonstrated to occur when plants are grown solely under greenhouse conditions. Propagated plants will produce at least 90,000 seeds with negligible impact on existing populations. These seeds will then be sown at three sites on Tulare Hill and one site adjacent to the existing population at Motorcycle County Park. SCU will monitor germination, survival to flowering, and seed production of reintroduced MCJ plants.

Findings

Based on the attached environmental assessment (EA), Reclamation finds that the Proposed

Action is not a major Federal action that will significantly affect the quality of the human environment. The attached EA describes the existing environmental resources in the Proposed Action area, evaluates the effects of the No Action and Proposed Action alternatives on the resources, and evaluates the need to propose measures to avoid, minimize, or mitigate any adverse effects from the action. This EA was prepared in accordance with the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR 1500-1508), and Department of the Interior Regulations (43 CFR Part 46). Effects on several environmental resources were examined and found to be absent or minor. This analysis is provided in the attached EA, and the analysis in the EA is hereby incorporated by reference.

Following are the reasons why the impacts of the proposed action are not significant:

1. The proposed action will not adversely affect threatened or endangered species.
2. The proposed action has no potential to affect historic properties.
3. The proposed action will not affect any Indian Trust Assets.
4. Implementing the proposed action will not disproportionately affect minorities or low-income populations and communities.
5. The proposed action will not affect any Indian Sacred Sites.
6. The proposed action will not have significant cumulative impacts.
7. There is no potential for the effects to be considered highly controversial.

RECLAMATION

Managing Water in the West

Environmental Assessment

Reintroduction of Metcalf Canyon Jewelflower at Tulare Hill in Southern Santa Clara County



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

June 2013

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Section 1 Introduction

1.1 Background

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared this environmental assessment (EA) to evaluate and disclose any potential environmental impacts associated with providing \$272,968 from the Central Valley Project Conservation Program (CVPCP) and the Central Valley Project Improvement Act Habitat Restoration Program (HRP) to Santa Clara University (SCU) to propagate and reintroduce the federally endangered Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*) (MCJ) to two sites at Tulare Hill and one site at Motorcycle County Park in southern Santa Clara County, California.

The proposed reintroduction at Tulare Hill in south San Jose includes lands owned by the Metcalf Energy Center Ecological Preserve and Santa Clara County Parks (Figure 1). Control sites established to monitor natural recruitment of MCJ for comparison with introduced populations would be located at Tulare Hill (located west of Highway 101), at Motorcycle County Park (off Metcalf Road on Coyote Ridge east of Highway 101), and across from Motorcycle Park at the adjacent Young Ranch.

1.2 Need for the Proposed Action

The project is needed to address MCJ recovery needs. According to the U.S. Fish and Wildlife Service (FWS) Recovery Plan for Serpentine Soil Species in the San Francisco Bay Area (USFWS 1998), MCJ should remain listed as federally endangered until 18 populations of at least 2,000 individuals each are fully protected and shown to be stable over a 20 year time period. Since several thorough surveys for the species have failed to reveal additional natural populations, at least eight new MCJ populations within the species' historical geographic range would need to be established in order to recover the species. The Recovery Plan calls for 25% of the species' populations to be located west of Highway 101, yet there are currently no natural populations remaining west of the highway. Reintroduction of MCJ at three sites on Tulare Hill (west of Highway 101) would address several of the species' needs called for in the Recovery Plan.

The proposed action contributes directly to the conservation and management of federally endangered plants on critical serpentine habitats in Santa Clara County previously impacted by the San Felipe Division of the Central Valley Project. The objectives of this project complement the short- and long-term goals of the CVPCP and HRP by directly contributing to the conservation status, habitat needs, and baseline biology of listed species in a CVP impacted habitat – serpentine soils of Santa Clara County.

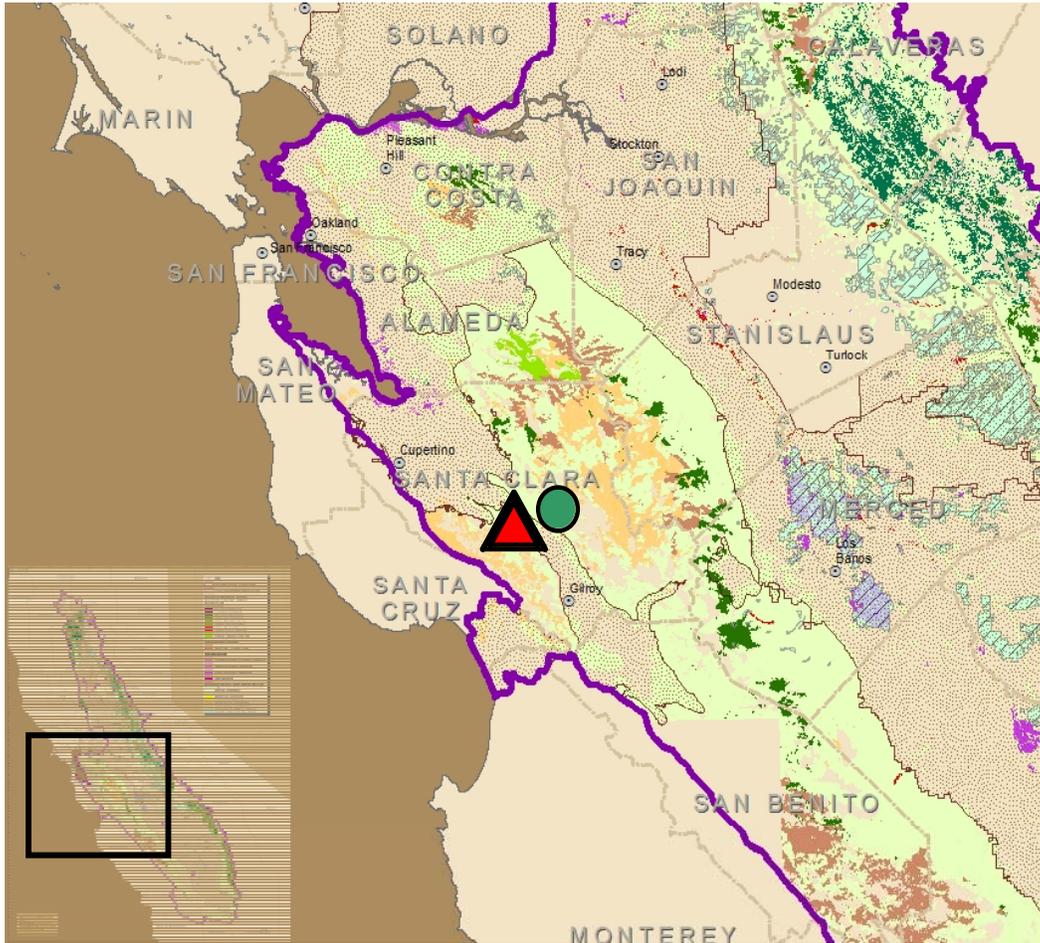


Figure. 1. Proposed location of the reintroduced population at Tulare Hill (red triangle) and the control population at Motorcycle County Park (green circle). The project occurs entirely within the CVPCP and HRP project area boundary (purple line).

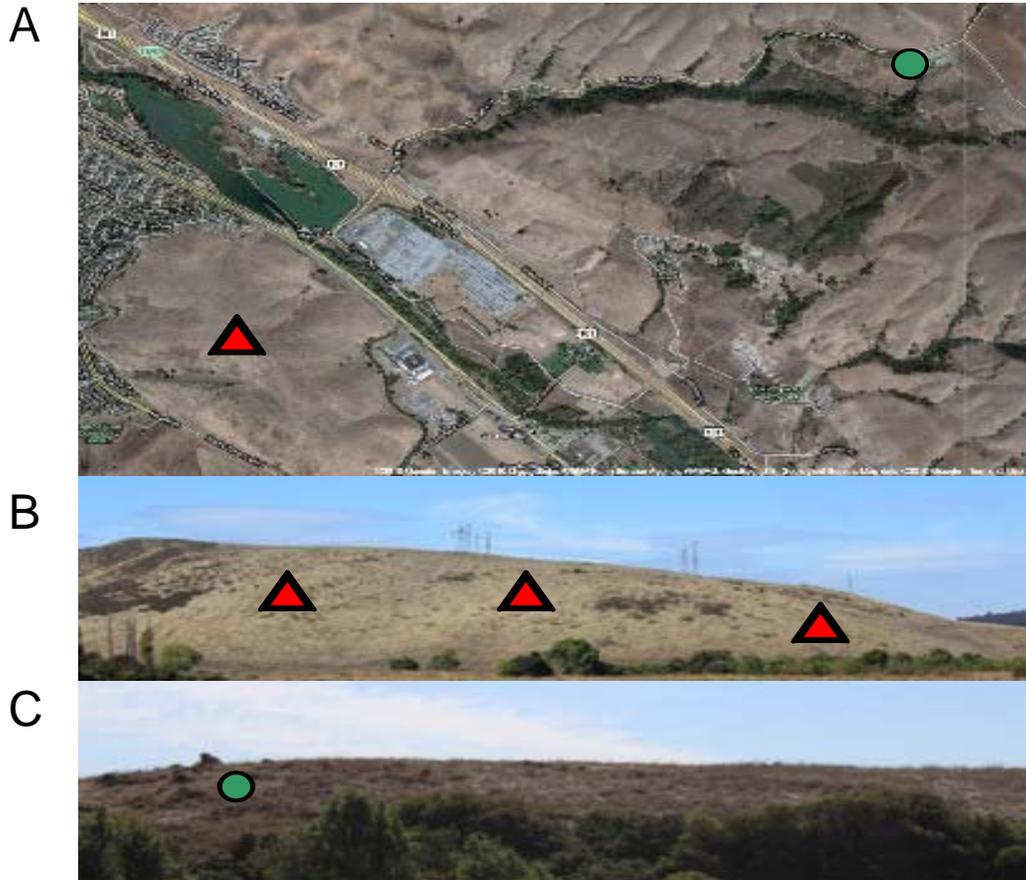


Figure 2. (A) Aerial view of the project location in southern Santa Clara Co. (Tulare Hill = red triangle; Motorcycle County Park = green circle); (B) three potential reintroduction sites on the southern slope of Tulare Hill away from the area where cattle congregate; (C) existing population at the northwestern corner of the Motorcycle County Park where control plots would be established (as seen from Metcalf Road looking south).

1.3 Potential Resource Issues

This EA analyzes the affected environment of the Proposed Action and No Action Alternatives in order to determine potential impacts and cumulative effects to Biological Resources.

1.4 Resources Not Analyzed in Detail

Effects on several environmental resources were examined and found to be minor. Because of this, the following resources were eliminated from further discussion in this EA: Air Quality; Groundwater; Water Quality; Aesthetic Resources; Geology; Global Climate Change; Soils; Seismicity; Hazards and Hazardous Materials; Land Use and Agriculture; Noise; Socioeconomics, Population and Housing; Recreation; Transportation and Circulation; and Utilities and Public Services.

Department of the Interior Regulations, Executive Orders, and Reclamation guidelines require a discussion of the following resources when preparing environmental documentation.

1.4.1 Cultural Resources

The Proposed Action has no potential to cause effects to historic properties pursuant to the National Historic Preservation Act Section 106 implementing regulations at 36 CFR Part 800.3(a)(1). (See Appendix A).

1.4.2 Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is a Public Domain Allotment approximately 41 miles Southeast of the project location. (See Appendix B).

1.4.3 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site." The proposed action would not be located on or impact any Federal lands and therefore would not affect any Indian sacred sites.

1.4.4 Environmental Justice

Executive Order 12898 requires each Federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Since there would be no change in existing or similar land uses, there would be no adverse human health or environmental effects to minority or low-income populations.

Section 2 Proposed Action and Alternatives

2.1 No Action Alternative

Reclamation would not contribute \$272,968 from the CVPCP and the HRP to SCU to propagate and reintroduce federally endangered MCJ plants at sites in southern Santa Clara County. SCU would be required to obtain the \$272,968 from other private and public sources.

2.2 Proposed Action

Reclamation would contribute \$272,968 from the CVPCP and the HRP to SCU to propagate and reintroduce federally endangered MCJ plants at sites in southern Santa Clara County. The total project cost for the project is \$546,122. The difference between the total project cost and the funding provided by the CVPCP/HRP is that provided in-kind by SCU. The in-kind partnership totals 50.0% of the total project cost. Figure 2 shows the specific areas to be restored.

SCU would implement a 4-year project to reintroduce MCJ while supplementing an existing population at Motorcycle County Park. In year 1, SCU would generate seeds for propagation by establishing a captive population of 200 individuals from a small amount of wild collected seed from all accessible MCJ occurrences. This would allow SCU staff to update occurrences of the species in California Department of Fish and Game's California Natural Diversity Database. MCJ plants would be started in pots at the SCU greenhouse and matured at field sites. The maturing of plants in the field avoids the failure of plants to produce seed under greenhouse conditions as has been the case with prior propagation efforts. The propagated population would produce more than 90,000 seeds, with negligible impacts on existing MCJ populations. The seeds would be sown at three sites on Tulare Hill and one site adjacent to the existing population in the Motorcycle County Park in years 2 and 3 of the project.

SCU would monitor germination, survival to flowering, and seed production in Years 2, 3, and 4. Given conservative estimates of germination rate, survival, and reproduction, SCU expects to establish about 5,000 reproductively mature MCJ individuals at the reintroduction sites capable of producing about 2.3 million seeds for germination in the wild by the end of the project period. Reintroduction success would be compared to recruitment in natural populations (the control) using several ecological and environmental variables, and summarized in an Adaptive Management Plan (Plan) to guide management of the reintroduced populations and future reintroduction efforts. The Plan would provide specific management suggestions on maintaining the reintroduced populations, and documenting the influence of environmental and ecological factors. These factors could include information on rainfall, soils, grazing, recreation, and other site uses. The Plan would also have information on invasive species that are most indicative of reintroduction success, recommendations for additional introductions, monitoring protocols, site abandonment criteria, and actions that would insure that the populations are self-sustaining.

Section 3 Affected Environment and Environmental Consequences

3.1 Biological Resources

3.1.1 Affected Environment

MCJ is an annual forb in the mustard family (Brassicaceae) that grows to one meter tall. It is a serpentine endemic known only from Santa Clara County. It grows in moderately disturbed serpentine grasslands, co-occurring with other rare species such as bay checkerspot butterfly, Santa Clara Valley dudleya, and Mount Hamilton thistle. The known historical distribution of MCJ is as restricted as its current distribution. It is found only in the Coyote Valley area of the Santa Clara Valley, primarily on the east side of the valley. MCJ is threatened by dumping and off-road motorcycle use. Road maintenance or construction threatens populations that occur on roadcuts. Grazing threatens some other populations (U.S. Fish and Wildlife Service 1995). The reintroduction sites are located outside the motorcycle use area at Motorcycle County Park. While dumping and other trespass impacts are a threat to the species in general in the range of the species, these impacts are not anticipated to occur at the reintroduction sites.

3.1.2 Environmental Consequences

3.1.2.1 No Action

If Reclamation does not provide funding to help restore MCJ populations, SCU would have to obtain the \$272,968 from other potential funding sources. The effects of no action would be the same as the proposed action if these funds are obtained from another source. If the funds are not obtained from another source, SCU would not be able to propagate and reintroduce MCJ, and FWS efforts to recover the species would be more difficult to achieve.

3.1.2.2 Proposed Action

The proposed project would provide major benefits to the conservation of MCJ by creating three new populations at Tulare Hill, and by supplementing existing populations at Motorcycle County Park.

In addition to establishing new populations of MCJ to help recover the species, SCU will carefully monitor reintroduction success throughout the plant's life history at multiple sites within Tulare Hill. Such information will assist SCU and others to improve the likelihood of success of future reintroduction efforts. Specifically, SCU would hone their germination and propagation techniques on a much larger scale than ever before attempted, and thus accomplish several top priority conservation objectives outlined in the Recovery Plan. Surplus MCJ seeds collected during the study would be added to those already banked at the University of

California, Berkeley to help protect the species from potential catastrophic losses to the few remaining populations, (another top conservation priority) (U.S. Fish and Wildlife Service 1996). The proposed project would also provide appropriate protocols for the closely related most beautiful jewelflower (*S. albidus* spp. *peramoenus*).

MCJ often grows on the same sites as the Santa Clara Valley dudleya, another federally listed endangered species (USFWS 1998). Reintroduction protocols established for MCJ through the study could be expanded and modified to be used for other endangered serpentine endemic plants, including the Santa Clara Valley dudleya.

The proposed project is part of larger regional recovery planning efforts being conducted by Federal, State, non-profit, and other partners for MCJ and other endangered species endemic to serpentine soil habitats in the San Francisco Bay Area (USFWS 1998). By fulfilling top priority recovery goals for MCJ, the project would contribute to the cumulative recovery efforts being conducted to benefit serpentine endemic species in Santa Clara County. Moreover, by demonstrating optimal reintroduction methods, the project could become a model for managing and restoring serpentine soil plants.

Partnering agencies, groups, and individuals in the Santa Clara Valley are developing a Habitat Conservation Plan/Natural Community Conservation Plan that includes MCJ as one of several target species. Reintroduction efforts and management recommendations developed through the project could be a valuable contribution to broader habitat planning efforts being undertaken for the area. That too will further efforts to recover, and potentially delist, serpentine soil plant species in Santa Clara County.

Long-Term Benefit: Serpentine-adapted plants are currently being investigated for economic purposes, including their use for bioremediation. Many serpentine soil plants accumulate heavy metals, having evolved to occupy soils unusually high in iron, nickel and manganese. Because of this unique ability, these plants are being researched for improving heavy metal contaminated soils. The jewelflowers (*Streptanthus* spp.) are known hyper-accumulators of heavy metals (Kruckeberg and Reeves 1995). They are able to selectively uptake metals from the soil and store them in aboveground tissues at concentrations typically toxic to most plants. In this way, they are top candidates as tools to reduce heavy metal contamination from soils. MCJ populations could provide long-term benefits to society by contributing to environmental improvement of hazardous soils, while maintaining ecological, biodiversity, and aesthetic values in a previously impacted region of the CVP.

The following measures to avoid, minimize, or mitigate adverse effects would be implemented by SCU:

1. Any biologists that collect voucher specimens, seed, or genetic material from listed plants must have all applicable State permits prior to the commencement of collection activities.
2. No more than 5 percent of the projected annual seed production of any wild individual listed plant or discrete population of plants will be collected.

3. At least 15 days prior to the start of plant or seed collection activities, a written proposal will be provided to FWS (email is acceptable). Collection activities will not commence until approval from FWS has been obtained. The proposal will be provided to the Coast Bay/Forest Foothills Division Chief and/or the Fish and Wildlife Biologist listed in the FWS' concurrence letter. The proposal will include:
 - a) A statement of whether the collection of seeds, vouchers, or genetic material will be from an existing population, newly discovered population, distinct occurrence, or a rediscovered occurrence.
 - b) An estimate of the number of individuals present at the occurrence and the aerial extent of the occurrence (in acres or square feet) of the area where material is to be collected. Should the submission of this information prior to plant or seed collection activities be infeasible due to site access restrictions, this information may be provided after the plant or seed collection is completed.
 - c) A statement describing how the collection will comply with the principles of the Center for Plant Conservation (CPC), in particular the CPC requirement that the collection shall not impact the viability of the occurrence or the species by removal of individuals from small populations.

3.2 Cumulative Effects

According to the CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions*. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

There are no adverse impacts associated with implementing the Proposed Action, and therefore there are no cumulative effects to consider.

Section 4 Consultation and Coordination

CVPCP and HRP Technical Team

CVPCP and HRP program managers are guided by a Technical Team of biologists and natural resource specialists from Reclamation, FWS, and California Department of Fish and Wildlife. During the period of December 2011 through March 2012, members of the Technical Team reviewed and scored proposals submitted to Reclamation for consideration for funding. The *Reintroduction of Metcalf Canyon Jewelflower at Tulare Hill in Southern Santa Clara County*

proposal ranked in the top tier of proposals and was selected for funding following evaluation by the Team. On March 29, 2012, Reclamation and FWS management approved the proposal for funding

Endangered Species Act.

On October 29, 2012, Reclamation sent a memorandum to FWS requesting concurrence in Reclamation's determination that the reintroduction of Metcalf Canyon jewelflower at Tulare Hill in Southern Santa Clara County and two other endangered plant CVPCP projects may affect, but are not likely to adversely affect, the Metcalf Canyon jewelflower or the other two plants. FWS concurred with this request on April 8, 2013. (See Appendix C).

Section 5 References

Kruckeberg, A.R. and R.D. Reeves. 1995. Nickel accumulation by serpentine species of *Streptanthus* (Brassicaceae): Field and greenhouse studies. *Madroño* 42: 458-469.

U. S. Fish and Wildlife Service, 1995. Endangered and threatened wildlife and plants; determination of endangered status for ten plants and threatened status for two plants from serpentine habitats in the San Francisco Bay region of California. *Federal Register* 60: 6671-6685.

-----, 1996. Endangered and threatened wildlife and plants; notice official decision on identification of candidates for listing as endangered or threatened. *Federal Register* 61: 64481-64485.

-----, 1998. Recovery plan for serpentine soil species in the San Francisco Bay Area. Sacramento, CA.

Appendix A

Cultural Resources Compliance Memo

From: Williams, Scott A
Sent: Tuesday, June 26, 2012 2:03 PM
To: Strait, Daniel H; Kleinsmith, Douglas H
Cc: BOR MPR Cultural Resources Section
Subject: Reintroduction of the Metcalf Canyon Jewelflower at Tulare Hill in Southern Santa Clara County (12-SCAO-184)

Tracking Number: 12-SCAO-184

Document: Reintroduction of the Metcalf Canyon Jewelflower at Tulare Hill in Southern Santa Clara County

Dan and Doug:

The proposed undertaking to reintroduce the federally endangered Metcalf Canyon Jewelflower (Fig.1) at three sites on Tulare Hill and supplement an existing population at Motorcycle County Park has no potential to cause effects to historic properties pursuant to the Section 106 implementing regulations at 36 CFR Part 800.3(a)(1).

The proposed reintroduction at Tulare Hill in south San Jose, southern Santa Clara County. The project involves reintroducing the federally endangered Metcalf Canyon Jewelflower at three sites on Tulare Hill and at Motorcycle County Park, west and east of Highway 101 south of San Jose. Seeds would be collected from live plants and produce bulk seed in a greenhouse. The production plants would be matured at the reintroduction sites. The project proponent would collect seeds from these plants and sow 18,000 seeds into 180 plots at Tulare Hill and 6,000 seeds into 60 plots at Motorcycle County Park. Sowing of the seeds involves broadcasting seeds in a plot area and tamping them down. The plants would then be monitored for a couple of years to determine post-reintroduction success relative to recruitment in natural populations. Based on the monitoring results at Tulare Hill, the project proponent would develop an Adaptive Management Plan to evaluate the reintroduction success, suggest best management practices, and guide future reintroduction efforts.

This concludes the Section 106 review process. Please retain a copy of this e-mail with the administrative record for this action. If the project activities change or circumstances are altered after this review, there may be additional Section 106 review responsibilities up to and including consultation with the California State Historic Preservation Officer.

Sincerely,

Scott A. Williams, M.A. Archaeologist
Bureau of Reclamation, Mid-Pacific Region
2800 Cottage Way, MP-153
Sacramento, CA 95825
916-978-5042

Appendix B

Indian Trust Assets Compliance Memo

RIVERA, PATRICIA <privera@usbr.gov> Tue, Jun 11, 2013 at 3:31 PM
To: DOUGLAS KLEINSMITH dkleinsmith@usbr.gov

Doug,

I reviewed the proposed action to provide \$272,968 from the Central Valley Project Conservation Program (CVPCP) and the Central Valley Project Improvement Act Habitat Restoration Program (HRP) to Santa Clara College to propagate and reintroduce the federally endangered Metcalf Canyon jewelflower (MCJ) to two sites at Tulare Hill in southern Santa Clara County.

The proposed reintroduction at Tulare Hill in south San Jose, southern Santa Clara County includes land owned by the Metcalf Energy Center Ecological Preserve and Santa Clara County Parks. Control sites would be at the Motorcycle County Park atop Coyote Ridge and Tulare Hill is just west of Hwy. 101 from Metcalf Road and also across Metcalf Road on Young Ranch.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is a Public Domain Allotment approximately 41 miles Southeast of the project location.

Patricia Rivera

Native American Affairs Program Manager
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California 95825



Appendix C Endangered Species Concurrence Memo



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



In Reply Refer To:
08ESMF00-2013-I-0100

APR 08 2013

Memorandum

To: Anastasia T. Leigh, Regional Environmental Officer, U.S. Bureau of Reclamation, Mid-Pacific Regional Office, Sacramento, California (Attn: Daniel Strait)

From:  Eric Tattersall, Deputy Assistant Field Supervisor, U.S. Fish and Wildlife Service, Sacramento, California 

Subject: Informal Endangered Species Consultation on Central Valley Project Conservation Program and Central Valley Project Improvement Act Habitat Restoration Program (CVP/CP/HRP) funding for the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California (Reclamation file No. MP-152, ENV-7.00)

This memorandum is in response to the October 19, 2012 memorandum from the U.S. Bureau of Reclamation (Reclamation) to the U.S. Fish and Wildlife Service (Service) requesting informal consultation on the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California. Your request was received by us on October 29, 2012. At issue are the effects of this action on the endangered large-flowered fiddleneck (*Amsinckia grandiflora*), endangered Tiburon paintbrush (*Castilleja affinis ssp. neglecta*), and endangered Metcalf Canyon jewelflower (*Streptanthus albidus ssp. albidus*). This response is provided in accordance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

This document was prepared based on: (1) information provided in Reclamation's October 19, 2012, letter; (2) the December 8, 2011, grant proposal entitled *Research facilitating recovery of the endangered serpentine endemic Tiburon paintbrush (Castilleja affinis ssp. neglecta) at Coyote Ridge in southern Santa Clara County* prepared by Creekside Center for Earth Observation; (3) the December, 2011, grant proposal entitled *Captive propagation and re-introduction of large-flowered fiddleneck (Amsinckia grandiflora) in Contra Costa and San Joaquin Counties, California* prepared by Vollmar Natural Lands Consulting; (4) the December 6, 2011, grant proposal entitled *Reintroduction of the Metcalf Canyon Jewelflower (Streptanthus albidus ssp. albidus) at Tulare Hill in southern Santa Clara County* prepared by Dr. Justen Whittall, Santa Clara University; and (5) other information available to the Service.

The proposed federal action involves providing grant funding through the CVPCP/HRP to 1) survey for, propagate, and reintroduce large-flowered fiddleneck in Alameda, Contra Costa, and San Joaquin counties; 2) to propagate and reintroduce Metcalf Canyon jewelflower on Tulare Hill and supplement an existing population at Motorcycle County Park in Santa Clara county; and 3) to test whether seeding or outplanting Tiburon paintbrush with potential parasitic hosts will facilitate survival and fecundity in the lab and at sites in Santa Clara county.

The following conservation measures will be implemented to avoid adverse effects to listed plants:

1. Any biologists that will collect voucher specimens, collect seed, or collect genetic material from listed plants must have all applicable State permits prior to the commencement of collection activities.
2. No more than 5 percent of the projected annual seed production of any wild individual plant or discrete wild population of plants will be collected.
3. At least 15 days prior to initiation start of plant or seed collection activities, a written proposal will be provided to the Service (email is acceptable). Collection activities will not commence until approval from the Service has been obtained. The proposal will be provided to the Coast Bay/Forest Foothills Division Chief and/or the Fish and Wildlife Biologist listed at the conclusion of the this letter. The proposal will include:
 - a) A statement of whether the collection of seeds, vouchers, or genetic material will be from an existing population, newly discovered population, distinct occurrence or a rediscovered occurrence.
 - b) An estimate of the number of individuals present at the occurrence and the aerial extent of the occurrence (in acres or square feet) of the area where material is to be collected. Should the submission of this information prior to plant or seed collection activities be infeasible due to site access restrictions, this information may be provided after the plant or seed collection is completed.
 - c) A statement describing how the collection will comply with the principles of the Center for Plant Conservation (CPC), in particular the CPC requirement that the collection shall not impact the viability of the occurrence or the species by removal of individuals from small populations.

Based on the limited collection of specimens and seeds described in the three grant proposals, implementation of the proposed conservation measures, and the beneficial effects to listed plant species that are anticipated to result from the proposed projects, the Service concurs that the proposed Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, if implemented as proposed, may affect, but is not likely to adversely affect the large-flowered fiddleneck, the Tiburon paintbrush, or the Metcalf Canyon jewelflower.

Supervisory Biologist

3

This letter does not provide authorization for the incidental take of any listed species. Unless new information reveals effects of the proposed action that may affect listed or proposed species in a manner or to an extent not considered, or a new species or critical habitat is designated or proposed that may be affected by the proposed action, no further action pursuant to the Endangered Species Act of 1973, as amended, is necessary.

If you have any questions regarding our response on the Research, Propagation, and Reintroduction of Three Federally-Protected Plant Species in Alameda, Contra Costa, San Joaquin, and Santa Clara Counties, California, please contact Stephanie Jentsch, Fish and Wildlife Biologist, (Stephanie_Jentsch@fws.gov) or Ryan Olah, Coast Bay/Forest Foothills Division Chief, (Ryan_Olah@fws.gov) at (916) 414-6600.

cc:

Craig Weightman, California Department of Fish and Wildlife, Napa, CA